

the necessity for some type of bypass graft. An autogenous saphenous vein graft or Gore-Tex synthetic graft can be used to bridge the common to internal carotid defect if there is an adequate internal carotid stump. In cases of removal of the internal carotid artery at the skull base or in cases of neck infections, autogenous vessels are used to complete an extra-intracranial anastomosis from the common carotid or subclavian artery to the middle cerebral artery. These grafts may then be covered with myocutaneous flaps to protect them from contamination or, in the case of a saphenous vein graft, from occlusion.

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## Otolaryngologic Manifestations of Acquired Immunodeficiency Syndrome

THE INCIDENCE of acquired immunodeficiency syndrome (AIDS) is increasing at a near-epidemic rate, with the number of cases doubling every six months. As of January 1984 the number of reported cases was 3,308 worldwide with a three-year death rate of nearly 100%. The syndrome is essentially the dermal malignant lesion, Kaposi's sarcoma, or life-threatening opportunistic infections, or both, in previously healthy homosexual men, Haitians, intravenous drug abusers and blood product recipients without other reasons for immune suppression. The infections are usually fungal, protozoal, viral or mycobacterial in which the T-arm of the immune system is the critical factor. The number of helper cells is reduced, inverting the helper-to-suppressor cell ratio to a mean of 0.4 (normal, 1.8 to 2.4).

Patients often have otolaryngologic and head and neck manifestations. In a retrospective study of 399 patients with AIDS seen at hospitals affiliated with the University of California, San Francisco, 41% had signs and symptoms referable to the head and neck as a chief complaint or as a finding on initial evaluation. Of these signs, 35% were oral, pharyngeal and cutaneous lesions of Kaposi's sarcoma; 8% were rapidly enlarging neck masses due to Burkitt's lymphoma; 31% were oral, pharyngeal, laryngeal and esophageal candidal lesions; 22% were chronic cough and shortness of breath due to infection with *Pneumocystis carinii* or *Mycobacterium avium-intracellulare*, and 4% were labial or oral lesions of herpes simplex. Some patients also had serous otitis, acute mastoiditis, sensorineural hearing loss, parotid mass, sinusitis, emergent airway obstruction, dysphagia or squamous cell carcinoma. Cervical lymphadenopathy was almost a universal finding.

The lymphadenopathy syndrome or "gay lymph node syndrome" warrants consideration because it can present as a neck mass, recurrent pharyngitis or tonsillar hypertrophy and because it is either a prodrome to AIDS or an alternative phenotypic response to the causative agent of AIDS. The lymphadenopathy syndrome is similar to AIDS in both the laboratory findings (mean helper-to-suppressor cell ratio of

0.7) and the constitutional symptoms of fever, night sweats and weight loss. The adenopathy is diffuse, with the posterior cervical chain being the most commonly involved. Lymph node biopsy is being done more frequently because of the appreciation of a purely lymphadenopathic presentation of Kaposi's sarcoma. The biopsy specimens usually show only follicular hyperplasia. Of the 200 patients with lymphadenopathy syndrome followed by Abrams and co-workers, AIDS has developed in eight (D. Abrams, MD, oral communication, August 1984).

The etiologic agent has not been conclusively identified but it is probably viral. As yet there is no single specific diagnostic laboratory test, including the determination of the helper-suppressor ratio. Currently, much of the therapy is specifically directed against the malignant lesion or opportunistic infections. While antibiotics remain a mainstay of treatment, surgical drainage of otitis and sinusitis is helpful in recalcitrant cases, not unlike the management of infection in the preantibiotic era.

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## Auditory Brain-Stem Evoked Response Measurement in Infants

THERE IS universal agreement that identifying hearing loss as early as possible enhances the rehabilitative possibilities for an infant with hearing loss. The auditory brain-stem evoked response to click stimuli provides an objective measure of the integrity of the peripheral auditory system and is one well-established procedure by which screening for hearing loss at birth may be accomplished. There are predictable differences in the morphologic characteristics of the infant auditory brain-stem evoked response compared with those in an adult with normal hearing. However, it is possible to identify a clearly replicable waveform at intensity levels near the threshold of hearing. A newborn at risk for hearing loss can be identified by results of auditory brain-stem evoked response showing one of several aberrant findings:

- Absence of an identifiable response at any intensity level.
- Absence of a replicable response at low-intensity levels or
- Increased latencies in one or more of the classic waves (I through V) identifiable in the auditory brain-stem evoked response at high-intensity levels.

Interpretation of results of auditory brain-stem evoked response from a newborn can be complicated by such variables as gestational age of the infant; middle or external ear anomalies, or acoustic stimulus variables, such as click repetition rates, frequency components of the signal and signal duration.

False-positive and false-negative error rates with the auditory brain-stem evoked response procedure among neonates